

Water Conservation News

Department of Water Resources Division of Local Assistance Water Conservation Office

July 1996

CALFED Bay-Delta Advisory Council Forms Water Use Efficiency Workgroup

Water use efficiency and demand management are topics that have received a great deal of attention as part of the CALFED Bay-Delta process. The Bay-Delta Advisory Council has appointed a Water Use Efficiency Work Group to identify and develop options to address policy issues related to efficient water use and demand management. The issues focus on three basic questions:

- ▶ *Should* water use efficiency concepts be included in the CALFED alternatives?
- ▶ *At what level* should water use efficiency measures be implemented?
- ▶ *How* should these measures be implemented?

Participants now agree that water use efficiency concepts should be included at some level in the CALFED alternatives. However, they

disagree over what term to use.

Initially, the Bay-Delta Program used the term “demand management” but some stakeholders prefer the term “water use efficiency,” pointing out that water recycling is an action that makes more efficient use of water but does not actually reduce demand.

On the other hand, land fallowing reduces demand by suspending rather than increasing the efficiency of that use. Referring to fallowing or land retirement as a “water use efficiency” measure incorrectly implies that agricultural water use is inherently inefficient.

The Work Group recognizes that no single term may adequately describe water conservation, water recycling, and land fallowing.

Key policy issues that may

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Furrow irrigation with tail water recovery system.

Efficient Water Management Practices—Ready, Set, Go!

The AB 3616 Advisory Committee has almost completed its Memorandum of Understanding for Efficient Water Management Practices (EWMPs). Last-minute changes are now being made to prepare the document for signing in late September.

In 1995 and 1996, a net benefit analysis was developed to determine if a particular EWMP was beneficial for a water supplier.

The net benefit analysis applies to the economic and environmental costs and benefits. During 1995 and 1996, the analytical procedure was developed in cooperation with eight water agencies including:

- ▶ Glenn-Colusa Irrigation District
- ▶ Corning Water District
- ▶ Sutter Extension Water District
- ▶ Oakdale Irrigation District
- ▶ Alta Irrigation District

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Water Conservation News provides information on the latest developments in agricultural and urban water conservation programs. This is a free newsletter published quarterly by the California Department of Water Resources, Division of Local Assistance, Water Conservation Office.

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Survey Response Gratifying

by Ed Craddock

Chief, Water Conservation Office

Many thanks to 15 percent of our 9,000 readers that responded to the survey we sent out on **Water Conservation News** in March of this year. Over 90 percent of them felt the articles have been informative and contribute to a better understanding of water conservation in California. Almost all responses rated the quality of information average or better, with 71 percent rating it good or better.

Our readers indicated a wide range of interest in conservation programs. The most common reasons for reading **WCN** were:

- ▶ information and research
- ▶ local water management issues
- ▶ legislation updates
- ▶ new and improved ways to conserve water

The conservation programs of greatest interest were:

- ▶ ag and urban water management planning
- ▶ irrigation management information
- ▶ gray water use
- ▶ low-water-using landscapes
- ▶ public information

It was gratifying to see that over 80 percent of **WCN** readers have been involved in water conservation for more than four years. Over 50 percent of **WCN** readers have been reading the newsletter for over five years.

We want **WCN** to be responsive to your needs. We hope you find this new, shortened, quarterly version as useful as our past issues. ■

Note: DWR does not endorse any of the businesses or consulting firms mentioned in this newsletter, since there may be others that offer the same or similar services.

CALFED Bay-Delta Advisory Council

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be addressed by the Work Group include:

- ▶ What general approach is most appropriate to implement water use efficiency measures?
- ▶ Can water use efficiency be included as a relatively uniform component in each alternative?
- ▶ How can water use efficiency be structured to complement the water supply components of each alternative?
- ▶ How would a uniform level of effort be structured in each alternative?
- ▶ Are urban Best Management Practices and agricultural Efficient Water Management Practices the appropriate uniform level for water conservation?
- ▶ Should water use efficiency measures be specified in alternatives, or should a target level of reduced demand be specified and the selection of measures left to water users?

The CALFED Bay-Delta Program is a joint effort among State and federal agencies with management and regulatory responsibilities in the Bay-Delta. The program involves significant public and "stakeholder" involvement, and seeks resolution of Bay-Delta problems by building consensus rather than fostering conflict. The Bay-Delta Advisory Council, or BDAC, is a group of more than 30 citizen advisors selected from California's agricultural, environmental, urban, business, fishing, and other interests who have a stake in finding long-term solutions for problems of the Bay-Delta system. With advice from BDAC, the CALFED Bay-Delta program is developing a range of alternative solutions. The alternatives, due in the summer of 1996, will be the subject of detailed environmental review.

The Work Group will analyze these issues for better understanding and consideration of the Bay-Delta Advisory Council. Products developed by the Work Group will be critical in the next phase of the CALFED Bay-Delta Program in the process of analyzing, evaluating, and enhancing alternatives.

Ed Craddock, Chief of the Water Conservation Office, is an invited participant in the Work Group. WCO is committed to providing information to assist BDAC in dealing with these issues.

The first meetings of the Work Group were held on May 23 and June 27. For up-to-date information, contact Rick Soehren of the CALFED Bay-Delta Program at (916) 657-2666 or fax (916) 654-9780. ■

Efficient Water Management Practices

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- ▶ Westlands Water District
- ▶ Wheeler Ridge-Maricopa Water Storage District
- ▶ Imperial Irrigation District

Eight workshops to introduce the MOU are being carried out during July and August by the California Farm Water Coalition; they are:

- | | |
|-------------|-----------------|
| ▶ Modesto | ▶ Sutter |
| ▶ La Quinta | ▶ Willows |
| ▶ Tulare | ▶ San Francisco |
| ▶ Los Banos | ▶ Bakersfield |

Participants in the workshops are being asked to provide comments on the contents of the briefing package they received. The comments will be incorporated into the final MOU to be circulated for signature. For questions, call Baryohay Davidoff, Department of Water Resources, at (916) 327-1788; e-mail baryohay@water.ca.gov. ■

Water Conservation *news briefs*

California Public Utilities Commission Authorizes Water Conservation

In March 1996, PUC authorized the Southern California Water Company to invest nearly \$1 million per year in water conservation programs. This was the first major water conservation investment allowed for rate recovery. PUC may eventually provide incentives for water conservation investment by all of its regulated water utilities as is done in the energy industry. Contact Deborah Braver at (916) 327-1770; e-mail dbraver@water.ca.gov.

WCO Lab Wins Environmental Protection Agency Grant

U.S. EPA Region 9 informed DWR's Water Conservation Office that \$50,000 will be awarded to DWR under the Pollution Prevention Incentives for States Program. The project will use the existing Mobile Irrigation Management Lab to reduce farm and landscape irrigation runoff containing nitrates and pesticides to tributaries of the Santa Margarita River. Other cooperating agencies are the Mission Resource Conservation District, San Diego Regional Water Quality Control Board, and San Diego County Water Authority. Contact Arturo Carvajal at (916) 327-1622; e-mail arturoc@water.ca.gov.

The Latest on Gray Water

DWR is working with several local water districts to install gray water systems at single-family homes within their jurisdictions to document water savings, analyze customer satisfaction, and determine the effects of gray water on the landscape. This two-year California Gray Water Study began July 1, 1996.

A new State law requires DWR to revise the Gray Water Standards to apply not only to single-family residences but also multifamily, commercial, industrial, and institutional developments. A public hearing to receive comments on the proposed changes was held June 12, 1996. The revised regulations should be in place by January 1, 1997.

DWR's publication, *Graywater Guide*, provides a step-by-step approach to designing, installing, and maintaining a gray water system. It is available at no cost from DWR's Bulletins and Reports Unit at (916) 653-1097, or by writing to them at 1416 Ninth Street, Sacramento, California 95814.

For additional information about gray water, contact Marsha Prillwitz at (916) 327-1620; e-mail marshap@water.ca.gov.

Irrigation Efficiency: On-farm vs. Regional Efficiencies

For many years, the discrepancies between on-farm and regional irrigation efficiencies have been the subject of much discussion, explanation, and misunderstanding. WCO staff, in cooperation with Dr. Kenneth Solomon of the Center for Irrigation Technology, Fresno State University, has developed a mathematical solution which explains the discrepancy. The solution takes into consideration water reuse from one farm to another. This work also shows the importance of reuse in advancing overall regional efficiencies. For further information, contact Baryohay Davidoff (916) 327-1788; e-mail baryohay@water.ca.gov or Ken Solomon at (209) 278-2361.

Irrigation Efficiency and Sustainability

WCO staff has calculated a range of on-farm irrigation efficiencies where the long-term productivity and sustainability of soils will be maintained. This work takes into consideration soil salinity as a major factor jeopardizing the sustainability of productive soils. For further information, contact Baryohay Davidoff at (916) 327-1788; e-mail baryohay@water.ca.gov or Fawzi Karajeh at (916) 327-1828; e-mail fkarajeh@water.ca.gov.

New On-Farm Drainage Reduction Demonstration/Study Projects Developed

DWR's on-farm drainage reduction and reuse program is initiating a number of innovative on-farm demonstration and study projects and educational workshops. The primary area of work will be in the southern San Joaquin Valley. These projects are designed to help growers and agricultural agencies manage irrigation water efficiently to reduce deep percolation and surface flows. Public and private agencies will be involved in conducting these projects. For further information, contact Fawzi Karajeh at (916) 327-1828; e-mail fkarajeh@water.ca.gov.

Greater Water Savings in Toilets

The JJID water-saving device is a replacement bowl filler tube that is certified to save at least one-half gallon per flush during the fill cycle on over 90 percent of existing toilets. It may even save one quart per flush on ultra-low-flush toilets. This device is currently saving the Marriot Hotel in Fullerton, California 800 to 1,000 gallons per day. JJID Enterprises is also working with EPA's Water Alliances for Voluntary Efficiency Program, the Hyatt Corporation, and a number of water agencies to help improve water use efficiency. JJID Enterprises can be contacted at 14020 Rancho Road, Suite C, Westminster, California 92683 or by telephone at (714) 899-7626.

Best Management Practices—Halfway Through the Process

The California Urban Water Conservation Council was created in 1991 with the signing of the Memorandum of Understanding to assist signatories with implementing and monitoring the BMPs contained in the MOU. Currently, 187 signatories have been working to implement programs and take other actions to make the process work. They have less than five years to go before the current MOU expires. Here is a rundown of two important developments:

► Independent Review of CUWCC Activities

An independent consultant has reviewed CUWCC internal operations and administration and interviewed signatories and representatives from various State and federal agencies. CUWCC received high marks in providing technical support and leadership to signatory agencies in the development of technical standards, and in contributing to the growing acceptance of water conservation as a water resource. However, CUWCC must still overcome some significant challenges, including providing better service to its signatories, detailing the effectiveness of BMPs, and coordinating its efforts more efficiently with other statewide programs and initiatives.

► Strategic Planning Committee

To meet the challenges cited in the independent review, CUWCC formed a Strategic Planning Committee in December 1995 that met in February, March, and April 1996. The Committee is discussing CUWCC's role in water resources management and is drafting a strategic plan. Some key components of that draft include a mission statement, an identification of key issues, a set of objectives for dealing with those issues, and an implementation plan.

The draft was completed for a special plenary session of CUWCC held in Sacramento on May 1, 1996. The strategic plan was then presented to all members of CUWCC at the regular plenary session hosted by Marin Municipal Water District on June 12, 1996. The draft plan should be approved at the September plenary session.

For Further Information

CUWCC is located in the offices of the California Urban Water Agencies in Sacramento. Susan Munves of the City of Santa Monica, the current Convener of CUWCC, can be reached at (310) 458-8229. Agencies or groups that would like more information about CUWCC, how to become a signatory, or how to obtain a copy of the draft strategic plan should contact Denise Phelps of CUWCC at (916) 552-5885.■

Challenge Grants Highlighted in USBR's Assistance Program

In 1993, USBR launched a \$3.1 million challenge grant program which funded the following three demonstration projects. These projects are now winding up their third and final year.

University of California, Davis

UCD received a grant to evaluate the use of "Regulated Deficit Irrigation" on a commercial scale by a large pistachio grower in the San Joaquin Valley. A team from UCD developed an RDI regime which can reduce applied water and evapotranspiration without affecting the yield or quality of the pistachio crop. Information on developing individual RDI schedules can be obtained from any UC Farm Advisor responsible for pistachios.

California Association of Resource Conservation Districts

Under this project, RCDs are working directly with local farmers, water districts, and the public to promote

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integrated approaches to farming. From Kern to Yolo Counties, farmers and district managers are improving water management, using less chemicals and energy, while promoting biodiversity. This has been accomplished by using native grasses, beneficial insects, irrigation scheduling, pump rehabilitation, cover crops, Integrated Pest Management, and other practices.

Natural Heritage Institute

The Natural Heritage Institute received a grant to work with water districts to implement and evaluate financial incentive programs. Collaborators include NHI, University of California-Berkeley, Arvin-Edison Water District near Bakersfield, and Westlands Water District near Fresno. They recently finished designing water pricing and delivery policies for Westlands and Arvin-Edison, which will be implemented and evaluated over the upcoming growing season.

The project's primary goal has been to encourage the management of irrigation water without dictating how to use any conserved water.

Further Information

For further information on the status of these studies and available reports, call Betsy Reifsnider of USBR's Water Conservation Office at (916) 979-2388. ■

New DWR Publications

The following publications are available **free** from: **Department of Water Resources
Bulletins and Reports
1416 Ninth Street
Sacramento, California 95814**

► ***Agricultural Efficient Water Management Practices that Stretch California's Water Supply, August 1995***

Explains some of the efficient water management practices growers and irrigation/water districts implement to sustain water supply savings; improve water use and irrigation efficiency; enhance fish and wildlife habitats; improve groundwater quality; and reduce agricultural drainage volume.

► ***CIMIS Alert, April 1996***

Explains how water and irrigation districts can access the CIMIS computer to retrieve ETo information for their agricultural and landscape irrigators.

► ***CIMIS Agricultural Resource Book, September 1995***

Includes CIMIS weather stations sites, Department of Water Resources CIMIS personnel, public agency contacts, consultants, irrigation software, and examples of how public and private agencies are using CIMIS (for the agricultural CIMIS user).

► ***CIMIS Urban Resource Book, January 1996***

Includes CIMIS weather stations sites, Department of Water Resources CIMIS personnel, public agency contacts, consultants, irrigation software, and examples of how public and private agencies are using CIMIS (for the urban CIMIS user).

► ***Summary Report: Results of Eight Demonstration and Study Projects in the San Joaquin Valley to Reduce Agricultural Drainage, June 1996***

Describes eight demonstration and study projects that DWR initiated about five years ago in the San Joaquin Valley. The purpose was to reduce agricultural drainage. Results are outlined.

Water-Conservation-Related Events

► **September 3-5, 1996—1996 Energy & Environmental Management Conference (TEEM '96)**

U.S. General Services Administration; California Energy Commission; DWR; Committee on Energy Efficiency, Commerce & Trade; U.S. Department of Energy; USAID; U.S. Department of Commerce; and others.
Monterey, California

Cost: \$295

Telephone: (703) 812-5396 or (800) 721-8336 (ask for Matt Burdestski)

Panel discussions and workshops on water efficiency, energy, efficient and environmentally preferable products, new technologies, U.S. assistance programs, codes and standards, performance contracting, and others.

► **September 11, 1996—CUWCC Plenary Meeting**

California Urban Water Conservation Council
Central West Basin MWD, Carson

Cost: Free

Telephone: (916) 552-5885

Quarterly meeting of CUWCC; includes presentations of residential, commercial, industrial, and institutional conservation programs, and the new cost-effectiveness guidelines.

► **September 11-13, 1996—Irrigation System Evaluation Short Course**

Irrigation Training & Research Center
Cal Poly, San Luis Obispo

Cost: \$200

Telephone: (805) 756-2434

Efficiency definitions and techniques of evaluation are emphasized, ranging from how to take a pressure measurement to what specific measurements are needed for evaluation of six distinct irrigation methods (furrow, border strip, hand move/side roll sprinkler, linear move sprinkler, undertree sprinkler, and drip/micro).

► **December 10-12, 1996—1996 Landscape Water Management Program**

Irrigation Training & Research Center
Cal Poly, San Luis Obispo

Cost: \$295

Telephone: (805) 756-2434

Techniques, data, and software tools to make the landscape water management process easier and more complete. Covers landscape irrigation auditing and landscape water budgeting.

► **January 28-29, 1997—"The Bottom Line—Making Irrigation Pay"**

California Irrigation Institute
Fresno, California

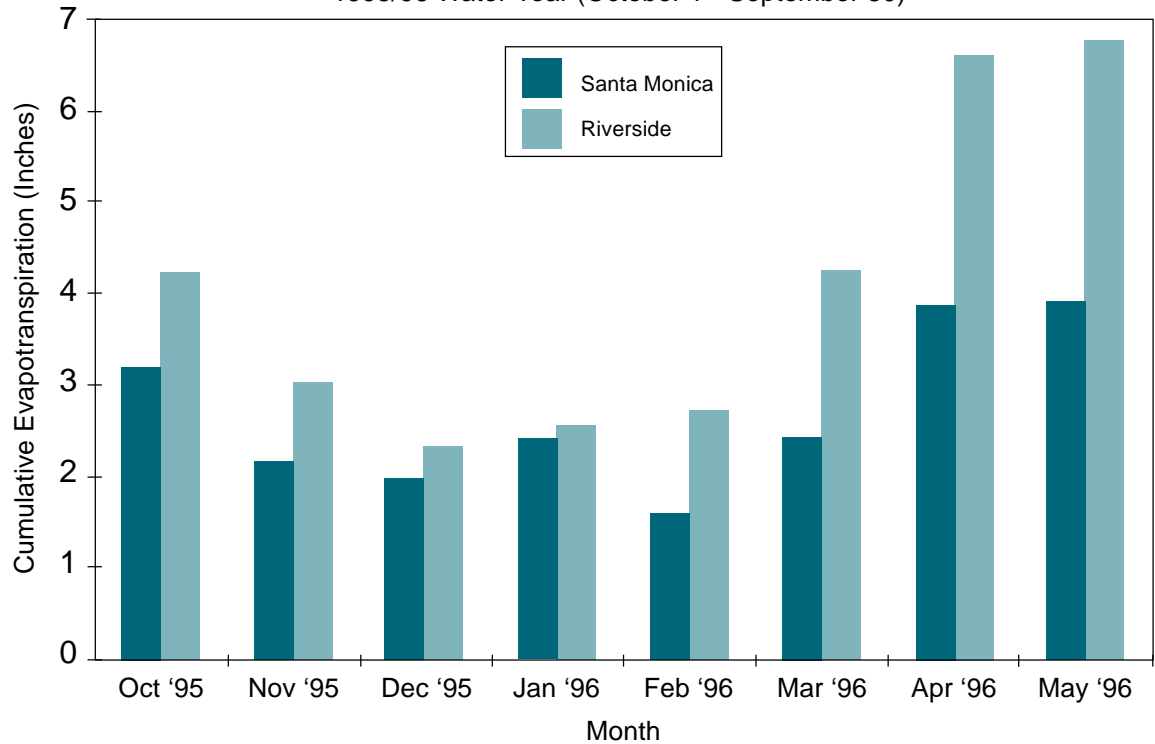
Cost: \$95

Telephone: (916) 366-9376

35th annual meeting of the California Irrigation Institute to educate those within and outside of the irrigation industry about all facets of irrigation in California.

CIMIS Network News

Monthly Cumulative Reference Evapotranspiration*
1995/96 Water Year (October 1 - September 30)



* Reference evapotranspiration (ET_o) is an estimation of the evapotranspiration of grass that provides an index of the water use of all kinds of vegetation. ET_o is estimated by weather stations making up the California Irrigation Management Information System (CIMIS). The stations at Santa Monica and Riverside indicate that vegetation in Riverside has used almost 50% more water than similar vegetation in Santa Monica through May. For more information on CIMIS, contact Simon Echling at (916) 327-1836 or David Moellenberndt at (916) 327-1792.

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